

## **DAVIESS COUNTY JOES RUN SOUTH THREATENED AND ENDANGERED SPECIES**

The federally endangered Indiana bat (*Myotis sodalis*) has the potential to occur in Daviess County, Kentucky (USFWS 2008). The Kentucky Fish and Wildlife Information System had 5 recorded Indiana bat observations for Daviess County (KDFWR 2010, accessed December 2012). There are no Priority 1-4 caves listed in the Indiana bat's Recovery Plan for the county (USFWS 2007). Based on the available information, no "known habitat" occurs in the study area or within a 10-mile radius.

Potential summer roosting and foraging habitats exist on the proposed Joes Run South mine site. The site is approximately 199 acres in size. Land use in the project area includes small blocks of forest (approximately 20 acres total) and agriculture/crop fields. Forest areas are located in the west and northwest section of the permit boundary. The site also has a narrow tree-lined perennial stream corridor along the western section of the project area and a narrow tree-lined intermittent stream corridor along the south section of the project area. This section of the project may provide potential habitat for the Indiana bat's summer use. The remaining project area consists of open areas and farm fields. A summer survey for the presence of Indiana bat has not been conducted.

To investigate the potential presence for caves, rockshelters, and abandoned underground mines to be present onsite, site visits by NRMS personnel, during February and March 2018 evaluated the site for potential Indiana bat habitat. No winter habitat for the Indiana bat was identified.

Hibernation site requirements for the Indiana bat include caves and mines with large volumes, extensive passages, and stable temperatures below 10 degrees Celsius (USFWS 2007). The Maceo and Philpot USGS topographic quadrangles do not show any cave or mine adit symbols within the project boundary. The Kentucky Surface Mining Viewer (2010) and Available Mine Maps from the Kentucky Mine Mapping Initiative (2010) were accessed (December 2012) for locations of mine shafts and active and closed permits. No caves, underground mines, or potential winter habitat for the Indiana bat were found on the project site.

The USFWS species database (2008), accessed December, 2012, lists several federally endangered mussel species as being known from Daviess County: orange pimpleback (*Plethobasus cooperianus*), sheepsnose (*Plethobasus cyphus*), clubshell (*Pleurobema clava*), rough pigtoe (*Pleurobema plenum*), fat pocketbook (*Potamilus capax*), fanshell (*Cyprogenia stegaria*), pink mucket (*Lampsilis abrupta*), and ring pink (*Obovaria retusa*). Kentucky's Comprehensive Wildlife Conservation Strategy describes the preferred habitat for each of these mussel species. Most of the species prefer medium-sized to large rivers with sand and gravel substrates, and specifically the Green River provides or has historically provided habitat to many of these mussels (KDFWR 2005). The permit boundary contains small intermittent and ephemeral streams. Suitable habitat for these mussels does not occur within the project area.

In addition to Federally listed species in the area, several State listed species are known from Daviess County and may occur in the project area. State listed species and their State status follow.

Pocketbook ( <i>Lampsilis ovata</i> )	E
Rabbitsfoot ( <i>Quadrula cylindric cylindrical</i> )	T
Lake sturgeon ( <i>Acipenser fulvescens</i> )	E
Cypress minnow ( <i>Hybognathus hayi</i> )	E
Black buffalo ( <i>Ictiobus niger</i> )	S
Spotted shiner ( <i>Notropis hudsonius</i> )	S
Northern crayfish frog ( <i>Rana areolata circularis</i> )	S
Copperbelly water snake ( <i>Nerodia erythrogaster</i> )	S
Evening bat ( <i>Nycticeius humeralis</i> )	S
Pied-billed grebe ( <i>Podilymbus podiceps</i> )	E
Bank swallow ( <i>Riparia riparia</i> )	S
Bewick's wren ( <i>Thryonastes bewickii</i> )	S
Barn owl ( <i>Tyto alba</i> )	S

Should these state-listed species be noted in the area during any project studies, they will be reported to KDFWR for their occurrence database compilation.

## REFERENCES

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- U.S. Fish and Wildlife Service (USFWS). 2007. Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN. 258 pp.
- U.S. Fish and Wildlife Service (USFWS). 2008. Current List of Kentucky's Threatened, Endangered, and Federal Candidate Species, by county. <http://www.fws.gov/frankfort/docs/FWS%202008%20SPP%20LIST.xls>. Accessed 12 September 2012.
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